

*Doubtful and extra limital species of Unio.*

*ambiguus*, Philippi; Reeve. *Vide australis*.

*Cumingi*, Dunker. *Vide cucumoides*.

*Moretonicus*. Smith, Voy. "Erebus and Terror," t. 4, f. 2, 1874.

*Vide cucumoides*.

*fulmineus*, Philippi, Conchylien, III., pt. 2, 1847, p. 46, t. 3, f. 5, 6. Not certainly Australian.

*superbus*, Lea (Hyridella), Obs. IV., p. 39, t. 22, f. 11; Reeve, Icon., t. 59, f. 295, 1868. Doubtfully Australian.

*Aucklandicus* Gray. Very doubtfully Australian.

Genus ANODON.

*Spurious species.*

*Angasi*, Sowerby, in Reeve's Conch., t. 32, f. 127, 1870=*Unio Angasi*.

*Stuartii*, Sowerby, id., t. 34, f. 136, 1870=*Alasmodon Stuartii*.

THE PLANTS OF NEW SOUTH WALES—No. I.

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The publication of the *Flora Australiensis* through the joint labours of Mr. G. Bentham, C.M.G., F.R.S., and Baron F. von Mueller, K.C.M.G., has formed, as it were, an era in the Botany of New South Wales. Though the subject is by no means exhausted, that great work will be regarded as the basis of all future treatises on the Flora of Australia; and as the grand outline is being gradually filled up with descriptions of new plants from different parts of the Continent, it will be seen that the general arrangement of the volumes, as well as the classification of orders, genera, and species, reflects the greatest credit on the distinguished authors. Much, however, remains to be done. Since the appearance of the first volume in 1863 some

five or six hundred new species of Australian plants have been discovered, and these, together with the enumeration of the Cryptogamous orders recently elaborated in the *Fragmenta Phytographiæ Australiæ* by Baron Mueller, must in the course of time appear in supplementary volumes to the *Flora Australiensis*. From the sources, however, now before the public, some estimate can be formed of the species indigenous in the Colony, and of the range to which they are limited. With regard to the latter, careful observation is still required in all parts of Australia, for plants, which, a few years since, were supposed to belong to the adjacent colonies are now found to be common to N. S. Wales. Thus, for instance, in the first volume of the *Flora*, including the *Thalamifloræ* and *Discifloræ*, the following species are not recorded as occurring in this colony; and no doubt, as in the formation of local *Floras* the plants of each district are carefully registered, the number of omissions will be proved to be greater than is now supposed. The species, to which I now refer are,

<i>Myosurus minimus</i> , (Linn.)	<i>Stellaria multiflora</i> , (Hook.)
<i>Brasenia peltata</i> , (Pursh.)	<i>Hibiscus divaricatus</i> , (Grah.)
<i>Apophyllum anomalum</i> , (F.v.M.)	<i>Elæocarpus holopetalus</i> , (F.v.M.)
<i>Comespermapolygaloides</i> , (F.v.M.)	<i>Elatine americana</i> , (Arn.)
<i>Cakile maritima</i> , (Scop.)	<i>Corræa alba</i> , (Andr.)

In attempting, therefore, to give a census of the plants of N. S. Wales, or of instituting any comparison between the genera and species of this and the adjacent colonies, the work can only be provisional, for in the progress of science great changes may be anticipated from observing the limits of species, and from the probable amalgamation of forms now recorded as as distinct. It may be well to remark, that so far as yet known, the following orders do not extend to N. S. Wales:—

Guttifera.	Burseraceæ.
Malpighiaceæ.	Ilicineæ.

The first of these orders is represented in Australia by one species, *Calophyllum inophyllum* (Linn.), which, according to the

*Flora*, is limited chiefly to the Percy Islands. From the *Fragmenta* (Vol. 9, 175), we learn that it extends to Adam's Bay, Cape York, Rockingham Bay, Edgecombe Bay, and Fitzroy's Islands; whilst the Baron, in the same account, introduces another species from Rockingham Bay, viz., *C. tomentosum*. The Malpighiaceæ are confined to solitary species of *Ryssopteris* and *Tristellateia* from Northern Queensland; the Burseraceæ, to one species of *Garuga* from N. Australia, and one of *Canarium* from N. Australia and Queensland, to which Baron Mueller has added *Ganophyllum falcatum* from Port Denison, Rockingham Bay, and Torres Straits; and the Illicineæ to *Byronia Arnhemensis* (F. v. M.), to which the same author has supplemented *Ilex peduncularis* (F. v. M.), from the woods near Rockingham Bay.

Excluding these four orders from the *Flora* of N. S. Wales, it appears that, in this colony, the orders, genera, and species (that is so far as yet determined) may be arranged as follows:—

## Series I. THALAMIFLORÆ.

Orders.	Genera.	Species.
22	68	167

## Series II. DISCIFLORÆ.

Orders.	Genera.	Species.
13	60	174
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Total 35	128	341
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The plants which have become naturalized may be referred to 8 orders, including 25 genera, and 29 species, viz.

1. *Ranunculus muricatus*, (L.)
2. *Argemone mexicana*, (L.)
3. *Fumaria officinalis*, (L.)
4. *Lepidium sativum*, (L.)

5. *L. ruderales*, (L.)
6. *Raphanus raphanistrum*, (L.)
7. *Sinapis arvensis*, (L.)
8. *Brassica campestris*, (L.)
9. *Sisymbrium officinale*, (Scop.)
10. *Senebiera didyma*, (Pers.)
11. *Capsella bursa-pastoris*, (Mæench).
12. *Camelina dentata*, (Pers.)
13. *Gypsophila tubulosa*, (Baiss.)
14. *Silene gallica*, (L.)
15. *Cerastium vulgatum*, (L.)
16. *Stellaria media*, (L.)
17. *Spergula arvensis*, (L.)
18. *Dianthus prolifer*, (L.)
19. *Polycarpon tetraphyllum*, (L.)
20. *Portulaca oleracea*, (L.)
21. *Sida rhombifolia*, (L.)
22. *Malva rotundifolia*, (L.)
23. *M. parviflora*, (L.)
24. *M. sylvestris*, (L.)
25. *Cristaria coccinea*, (Pursh.)
26. *Linum gallicum*, (L.)
27. *Erodium moschatum*, (Willd.)
28. *Oxalis cernua*, (Thunb.)
29. *Pelargonium graveolens*, (Ait.)

From the 341 species of dicotyledonous plants in N. S. Wales some idea may be formed of the intermediate character which marks its Flora; for whilst it has many species which are common to Queensland and Victoria, the former has a greater affinity for that of India and China, and the latter a greater affinity for that of Tasmania than the Flora of this colony has. From the following list, it appears that the Cruciferæ are much more numerous in Victoria than in Queensland, whilst in the Malvacæ, Capparideæ, and Nymphæaceæ, the reverse is the case.

## RUTACEÆ.

			Gen.		Spec.
Queensland	..	..	19	..	36
New South Wales	..	..	17	..	65
Victoria	..	..	6	..	35

## MALVACEÆ.

Queensland	..	..	8	..	36
New South Wales	..	..	9	..	28
Victoria	..	..	5	..	8

## CRUCIFERÆ.

Queensland	..	..	2	..	3
New South Wales	..	..	12	..	28
Victoria	..	..	14	..	32

## CAPPARIDÆÆ.

Queensland	..	..	3	..	13
New South Wales	..	..	3	..	6
Victoria	..	..	1	..	1

## NYPHÆACEÆ.

Queensland	..	..	3	..	4
New South Wales	..	..	2	..	2
Victoria	..	..	1	..	1

With regard to the distribution of the Rutaceæ, it is difficult to account for the large number of the species in New South Wales, unless it may be inferred that the geological formation is more favourable for their development. The distribution of the Tremandree (which Mr. Benthams says is an order strictly confined to Australia) is very remarkable, 1 species being found in Queensland, 4 in New South Wales, 5 in Victoria, 14 in Western Australia, 1 in South Australia, and 3 in Tasmania.

In reference to plants which have been introduced, some difference of opinion prevails. Some years since, a paper of

mine on the subject was read before the Linnean Society in London, in which I made a calculation, that more than a hundred such plants might be found within fifty miles of Parramatta. That number, I believe, is not over-estimated. Of the Dicotyledoneæ not indigenous in New South Wales, there are probably about 30, but as the other volumes of the *Flora Australiensis* come under consideration, I think that the number will be augmented to 150. In order, however, to form an accurate list of the introduced and indigenous species, and to compare them with the Floras of the Australian colonies or the Flora of Australia generally, considerable attention must be paid to the collection of plants in particular districts and the compilation of local herbaria. During the last year or so, a great step has been taken in this direction in most of the Australian Colonies, and Baron Mueller, to whom this movement may be mainly attributed, has commenced a full and accurate description of all plants indigenous in Victoria. When this valuable work has been completed, it will afford a basis for works of a similar character in other parts of Australia, and then, there will be little difficulty in instituting those comparisons to which I have alluded. With regard to the geographical distribution of Australian plants in general, Mr. Bentham has fully indorsed the views of Sir J. D. Hooker, as laid down in his admirable essay prefixed to his *Flora Tasmaniæ*. And thus the former concludes, that, whilst the predominant portion appears to be indigenous and never spread far out of it, there is evidence to show that, in remote antiquity, the principal Flora had a connection with Eastern Asia on the one hand, and, from the mountains of Victoria and Tasmania through New Zealand to the Southern end of the American Continent and thence up the Andes, on the other.

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